

Topic Modeling the Research-practice Gap in Public Administration

Richard M. Walker

rmwalker@cityu.edu.hk

Laboratory for Public Management and Policy
Department of Public Policy
College of Liberal Arts and Social Sciences
Tat Chee Avenue, Kowloon Tong
Hong Kong

Yanto Chandra

yanto.chandra@polyu.edu.hk

Department of Applied Social Sciences
The Hong Kong Polytechnic University
Hung Hom, Kowloon
Hong Kong

Jiasheng Zhang

jzhan39@cityu.edu.hk

City University of Hong Kong
Florida State University

and

Arjen van Witteloosijin

Biostatements

Richard M. Walker is Dean of the College of Liberal Arts and Social Sciences, Director of the Laboratory for Public Management and Policy and Chair Professor of Public Management in the Department of Public Policy at City University of Hong Kong. Richard's research examines questions of management and performance in public organizations, and he seeks to use novel research methodologies to explore these issues.

Yanto Chandra is Associate Professor in the Department of Applied Social Sciences at The Hong Kong Polytechnic University. Yanto's research examines questions of strategy and performance in social innovation/social entrepreneurship and public policy and their linkage to sustainable development. He is passionate in applying novel methods including quantitative text analysis, computational linguistics, and various computational social sciences techniques.

Jiasheng Zhang is a Ph.D. Candidate in the Askew School of Public Administration at Florida State University and currently works as Senior Research Associate at City University of Hong Kong. He studies public management (public service performance, innovation, and collaborative governance) and public policy (sustainability policy). He is well trained in quantitative methods, including experimental design and big data.

Arjen van Witteloosijin

Topic Modeling the Research-practice Gap in Public Administration

Abstract

The possible existence of a research-practice gap is the topic of a longstanding debate in the field of public administration. In this study, we examined the agendas of scholars and practitioners using the topic modeling technique of computational social science. Topic modeling content analysis of 35 identified topics in the *Public Administration Review* and *PA Times* (3,796 articles) showed that just over 50% of topics were common to both groups, indicating shared interests. There were, however, topics distinctly focused on by the two groups. Moreover, scholars and practitioners attached significant differences to the weights allocated to the prominent topics in their writing. Taken together, these findings indicate that topic modeling can shed new light on the research-practice gap in public administration.

Simon (1947) famously described public administration (PA) as a design science solving complex, human-related, real-world problems. Central to solving these problems are the scholars and practitioners who constitute the PA “community.” However, the literature on the relationships between scholars and practitioners has typically highlighted challenges: for instance, Newland (2000) discussed “struggles for connectedness.” Scholars are concerned about the extent to which their research can engage and contribute to practice, while practitioners lament the fact that scholarly work is not easily understood, too abstract, or offers limited wisdom for practice. This is what some authors have called the “two communities” phenomenon or the research-practice gap (Edwards 2005; Newman, Cherney and Head 2016).

In this debate, one stream of research has suggested that practitioners do not use or value academic research, implying that there is a lack of congruence between scholarly research and practice (Howlett and Newman 2010). This disconnect can be explained by the ambiguous and often conflicting goals and expectations of research in universities vis-à-vis what is needed in practice (van Witteloostuijn 2016). However, another stream of research has suggested that academic research is valuable to practitioners and has a concrete influence on their policy advice and decision-making. Studies have shown that policymakers use research to varying degrees, depending on the questions asked, the level of risk involved, and the area in which they work, suggesting that the interaction between policy and academia should not be seen as a disconnect but can be viewed as a continuum (Jennings and Hall 2012; Newman, Cherney and Head 2016). To date, studies on the research-practice gap have mainly used observational data from surveys or interviews. In contrast, this study used a computational social science technique, topic modeling, to examine whether scholars and practitioners are at opposite ends of the continuum or if there is common ground between them.

We addressed this issue by identifying scholars' and practitioners' topics of interest. By identifying the main topics of concern for both groups, we could better articulate and map their relative location in the gap to stimulate a new conversation to bridge this gap. We used topic modeling, a machine learning technique, to analyze the content of the titles and abstracts of *Public Administration Review* (PAR) and *PA Times* (PAT) articles over the last decade.¹ We identified and compared various topic areas derived from the text corpora. The analysis suggested common ground in the gap: the two groups shared the same or similar interests in 18 topics—just over 50% of the topics—while differences were found in 17 topics. However, the weights assigned to these topics by scholars and practitioners varied, showing subtle but important differences in the main topics of interest for both groups, indicating a research-practice gap. The findings are thus indicative of a continuum and not a disconnect, but with the balance more being at the side of disjoint interests.

Data and Methods

Data

We collected 3,796 published articles from two main sources: PAR (titles and abstracts for 782 articles) and PAT (3014 articles).² Both journals are published by the American Society for Public Administration (ASPA). PAR is a bimonthly peer-reviewed academic journal devoted to research, theory, and practice in PA, and a leading journal in the scholarly field of PA. PAT is published online twice a week and highlights emerging trends in PA and expert columns on best practices and lessons learned for public managers and public sector employees. The PAR and PAT articles were chosen to represent the perspectives of research and practice, **respectively**.³

Topic Modeling

Topic modeling is an algorithm for finding topics in large and unstructured text data collections. It is part of the “text as data” movement in the fast-growing field of computational social science (Roberts et al. 2014; Grimmer and Stewart 2013). The idea behind topic modeling is that documents are a mixture of topics, in which a topic is a probability distribution over words, allowing words with similar meanings to be clustered (Blei and Lafferty 2007; Steyvers and Griffiths 2007). Among the many topic models, Latent Dirichlet Allocation (LDA) is perhaps the most commonly used technique (Blei, Ng and Jordan 2003). LDA is a Bayesian mixture model for discrete data in which topics are uncorrelated. The objective of topic modeling is to extract latent semantic topics from large volumes of textual documents (i.e., corpora). Because of this feature, topic modeling has been used as an analytical tool in various fields of study (Haans and van Witteloostuijn 2019; Jiang, Meng and Zhang 2017; Lauderdale and Clark 2014).

The topic modeling method has several advantages when applied to text corpora. First, compared with traditional (i.e., manual) narrative review, which involves directly reading and assessing bibliographic materials subjectively, topic modeling uses text mining to objectively and more efficiently examine large quantities of texts. Second, unlike previous studies that have often used a preconceived taxonomy as a guiding framework for classifying (latent or hidden) topics, topic modeling uncovers latent topic categories using a systematic and grounded analytical approach. Therefore, the process is more transparent and replicable, which helps overcome the ambiguity of manual or taxonomy-based categorizations. Third, the unit of analysis in topic modeling is the emerging topic and not the article, which allows researchers to trace topics across articles and better map current discourses in the field and their dynamics over time. From the perspective of topic modeling, each article is a mixture of multiple topics with

different probabilities, among which the topic with the highest probability is called the primary topic. This means that each article has one primary topic. The topic weight is measured by the number of articles with the primary topic divided by the total number of articles. A topic with a higher topic weight is considered a more prominent topic.

The analysis consisted of three main steps. The first step was data preprocessing. We merged the title and abstract of each PAR article into a single document and created a corpus of 782 text files and merged each PAT article into a single document and created a corpus of 3,104 text files. We then removed all stop words (e.g., articles, such as “a,” “an,” or “the,” and prepositions, such as “of,” “by,” or “from”), numbers, and punctuation characters, and converted the text to lowercase in the corpora. As some general words appear in most scholarly articles, e.g., “article,” “find,” “effect,” or “discuss,” we constructed a list of additional stop-words and removed them from the corpora. The second step was to fit the model. Using the *tm* package in the R programming language, we converted the articles into a document-term matrix (DTM) to facilitate topic modeling. We specified the number of topics before fitting the model. Different metrics (Cao et al. 2009; Arun et al. 2010; Griffiths and Steyvers 2004) were used as benchmarks and the results revealed that the optimal number of topics was 35 for both publications.⁴ We used the R package *topicmodels* to fit the LDA model (Hornik and Grün 2011). Finally, after fitting the LDA model, we manually validated the topics and labeled them.⁵ Topic labeling was conducted by **the authors of the article that have** more than 40 years of research experience in the field of PA. The lists of the most prominent words for each topic and randomly selected articles were provided to the experts, and each expert was asked to label each topic individually. Topic labels were selected by consensus.⁶

We present our results below in three tables and one figure comparing the areas of

interest (i.e., topics) in PAR and PAT. The left panel in each table lists the topics from PAR and the right panel those from PAT. Each topic is ranked by its topic weight; that is, the percentage of articles associated with each topic. The tables show the extracted and labeled topics. The analysis of the topics is presented in three groups. First, category “same topics” consist of topics with almost the same terms for the two groups. Second, “similar topics” include topics with similar broader themes but whose focus varied when topic terms were examined. Third, the “distinct topics” category are the unique topics discussed by scholars and practitioners. We indicate the topic weight (TW) ranking for ease of comparison.

Findings

Same Topics

Table 1 shows the nine “same topics” shared by scholars and practitioners. These include readily identified topics in PA: emergency management, financial management, nonprofit management, and performance management. Some of these topics had similar rankings in PAR and PAT. For example, performance management, one of the most fundamental changes brought about by New Public Management, was the 3rd (TW = 4.48%) most studied topic for scholars and ranked 5th (TW = 3.95%) for practitioners, while emergency management was a pressing concern for both practitioners (ranked 4th, TW = 4.28%) and scholars (ranked 10th, TW = 3.20%).

[Insert Table 1 about here]

However, a closer look at the ranks and topic weights in Table 1 suggests variations in the overall importance of these “same topics” and other topics between scholars and practitioners. A number of “same topics” were ranked relatively low among all topics by both

communities. These topics were the following: financial management, ranked 16th (TW = 2.81%) by scholars and 15th (TW = 2.85%) by practitioners; public-private relations, ranked 24th (TW = 2.30%) by scholars and 23rd (TW = 1.99%) by practitioners; and ethics, ranked 22nd (TW = 2.56%) by scholars and 26th (TW = 1.92%) by practitioners. Conversely, some topics had a high ranking in PAR, but a low ranking in PAT, or vice versa. For example, practitioners ranked healthcare as an important topic (6th, TW = 3.95%), but not scholars (25th, TW = 2.30%). Nonprofit management ranked 21st (TW = 2.56%) in our analysis of PAR, but ranked 9th (TW = 3.62%) in PAT. Citizen participation was not considered a highly salient topic by practitioners (25th, TW = 1.99%), but was widely studied by scholars (7th, TW = 3.45%).

To examine the changes in these nine “same topics,” we plotted their topic weights over time. In Figure 1, the horizontal axis represents time and the vertical axis the topic weights. The dotted lines describe the changing patterns of the topic weights for the scholarly articles and the solid lines those for the practice articles.

[Insert Figure 1 about here]

The nine panels in Figure 1 show that the topic weights were initially higher in scholarly work. While the chosen period of analysis may influence the visualization of the topics, necessitating further research on the founding topics (cf. Haans and van Witteloostuijn 2019), these data suggest that scholars followed these agendas, which were then surpassed by the topic weights of the practitioner writing in PAT. Within this, scholars and practitioners’ attention exhibits different patterns over time. In particular, the attention paid to emergency management and healthcare reached its peak at different times, probably because these issues are heavily

shaped by “front-burner” events, social media, and political campaigns. For example, the topicality of health for practitioners was driven by the implementation of Obamacare after 2010. In contrast, the attention that scholars and practitioners paid to public-private relations was consistent, especially after 2012, indicating a congruence of focus on this topic.

Similar Topics

The nine “similar topics” with similar broader themes are shown in Table 2. The data show the differences in focus on “similar topics,” with scholars examining certain aspects of the topics and practitioners typically focusing on more general discussions of the topics. The examples include two highly rated topics: public service motivation (2nd, TW = 5.88%)/human resource management (3rd, TW = 4.48%), and leadership (8th, TW = 3.75%)/leadership strategy (8th, TW = 3.32%). When discussing human resource management, scholars paid more attention to the motivational aspect of public employee work, whereas practitioners focused on the employee, their work, and the entire workforce. Similarly, scholars focused more specifically on strategic leadership practices, while practitioners discussed the importance of leadership and team building in organizations. These differences in focus highlight the research-practice gap, particularly where the need to publish pushes scholars towards more narrowly defined topics.

[Insert Table 2 about here]

Similar to “same topics,” there were also differences in the overall importance of the topics. Four topics in Table 2 have a ranking difference of more than 10 places. Scholars ranked representative bureaucracy lower (23rd, TW = 2.43%) than practitioners ranked social equity (11th, TW = 3.28%). Similar divergent priorities were observed in environmental governance

(32nd, TW = 1.41%) and sustainability (17th, TW = 2.62%). Conversely, practitioners ranked innovation lower (30th, TW = 1.66%) than scholars ranked the related topic of reform (5th, TW = 3.84%), and they ranked intergovernmental relations lower (32nd, TW = 1.49%) than practitioners ranked local-state government relations (4th, TW = 4.22%).

Distinct Topics

There were 17 unique topics for scholars and practitioners (see Table 3). These topics highlighted actual differences in interest by being placed further apart on the research-practice continuum, symptomatic of a wide gap. An interesting result was that the top ranked topic for each group reflected distinct areas of interest for scholars (TW = 7.29%) and practitioners (TW = 7.66%): PA practice and practical solutions, respectively. Table 3 shows again that scholars used more abstract theoretical concepts (public values, red tape, federalism, collaborative governance, and institutional capacity), while practitioners focused on specific issues (law enforcement, aging, education, veteran welfare, and food safety) to find practical solutions to these problems. One reason for this difference may be that although scholars are encouraged to present the practical implications of their research, they may often write what they perceive to be important to practitioners. Therefore, the primary topics emerging from scholarly research may not always correspond to the main concerns of practitioners. For example, aging, veteran welfare, and food safety issues were highly ranked topics by practitioners, while they were rarely studied by scholars. Likewise, emerging trends such as social media and information technology were rarely studied by scholars, but were of great interest to practitioners.

[Insert Table 3 about here]

Discussion

Some may argue that scholars and practitioners are at different ends of the research-practice continuum and that closing this gap is too difficult a task, as scholars and practitioners ask different questions, use different methodologies to answer these questions, and generate answers that are often irrelevant to the other party. The results of this study revealed some convincing evidence of the research-practice gap, with a clear divergence of topics between scholars and practitioners. In addition, there were some subtle differences associated with the weights attached to the topics. However, there was also the suggestion of common ground between scholars and practitioners on a wide range of topics.

Scholars and practitioners shared 18 “same topics” or “similar topics,” with higher topic weights than “distinct topics” (total TW = 57.68% for scholars and 53.08% for practitioners), suggesting that they converged on important topics. The analysis of dynamic changes in the nine “same topics” published in PAR and PAT over time showed subtle differences in attention to topics. Due to the nature of the issues, the interests of scholars and practitioners resulted in a one- to two-year gap during the period analyzed. In addition, nine “similar topics” with broader themes were shared between scholars and practitioners, but the two groups ranked them differently. Nonetheless, the findings suggest that the interests of scholars and practitioners may overlap and that it is possible to develop topics and agendas that meet the interests of both groups. For example, “same topics” and “similar topics” had similar numbers of topics rated in the overall top 10 most important topics for the two groups: eight for scholars and seven for practitioners. However, the lowest ranked topics in Tables 1 and 2 include four topics for practitioners (citizen participation, ethics, innovation, and intergovernmental relations) and one

for scholars (healthcare). This further highlights subtle differences in the relative importance of topics for scholars and practitioners and the divergence between the two groups.

“Distinct topics” highlighted more clearly that scholars and practitioners were at different ends of the research-practice continuum, symptomatic of a gap. These topics are indicative of concerns in the literature that academics’ focus is relatively narrow and that of practitioners relatively broad. In addition, practitioners grasped cutting-edge and critical issues in PA, such as age and information use. Some of these differences may be attributable to the different publication processes and different interests of PAR and PAT. Indeed, academic journals such as PAR must follow a rigorous and lengthy peer review process, which may slow down topic innovation. In contrast, PAT responds to trending social issues and societal changes. Also, it may take a while before novel academic insights find their way to practice.

These findings speak to the “two-communities” argument, which is suggestive of the different norms and values of practitioners and scholars (Newman, Cherney and Head 2016). Academics focus on advancing scholarly knowledge through rigorous and technical methodologies, and practitioners pay more attention to user-friendly knowledge in readable language (Landry, Lamari and Amara 2003). To bridge the gap, knowledge transfer mechanisms that facilitate sustained and intense interactions (such as conferences, online and offline forums, magazines) between researchers and practitioners, and vis-a-versa, that adapts research products to users’ needs, and to incentivize users to actively acquire academic knowledge, should be explored.

The two ASPA outlets are the two communities’ primary places of publication. Further research using different periods and different academic and practitioner journals may provide more comprehensive results. However, this study presented a new analytical technique—topic

modeling—for a more objective, transparent, and efficient analysis of textual data, offering ample opportunities for future work to produce important new information and insights for the study and practice of PA.

Notes

¹ The PAT archives used ranged from 2010 to February 2019. The PAR articles ranged from 2008 to 2017. Both contained 10 years of articles. The supplementary online materials present the separate topic ranking for PAR and PAT.

² Abstract and title information for the PAR articles was collected from the Web of Science and for the PAT articles, information was collected from the magazine's online archive (<https://patimes.org/library/>, date of retrieval: 03/15/2019). According to the PAR publication guidelines, the title and abstract of the article should appeal to both scholars and practitioners. An abbreviated version of the main idea of the article should be used in the title. In addition, the abstract should be a concise summary of the research paper, including the topic, arguments, and conclusions. From this perspective, we should be able to grasp the main idea of the article by reading the abstract and title. However, the PAT articles are closer to periodicals, and only by reading the whole piece can we grasp the main theme of the article. Therefore, we believe that the abstracts and titles of PAR and the full texts of PAT are comparable.

³ We acknowledge that the authors in either PAR or PAT comprise both scholars and practitioners. Indeed, historically, PAR has sought submissions by practitioners, some of whom are expert researchers, and some scholars publish their insights in PAT. Nonetheless, the two outlets have distinct niches: PAR publishes more theory-driven research, while PAT publishes more practice-oriented articles. We thank one of the anonymous reviewers for drawing this to our attention.

⁴ Cao et al. (2009) demonstrated that the LDA model performs best when the average cosine distance of the topics reaches the minimum. Arun (2010) viewed LDA as a matrix factorization method, which factorizes a document-word frequency matrix M into two matrices M_1 and M_2 of

order $T*W$ and $D*T$, respectively, where T is the number of topics and W is the size of the vocabulary of the corpus. The metric is computed in terms of symmetric KL-Divergence of salient distributions derived from the two matrix factors, the divergence values being lower for the optimal number of topics. In addition, Griffiths and Steyvers (2004) suggested that one way of selecting the number of topics is to approximate the marginal corpus likelihood using the harmonic mean of a set of samples generated by the Gibbs sampler. These different metrics indicated that the optimal number of topics ranged from 30 to 35 for PAR and from 30 to 50 for PAT. Applying human validation, we decided that the optimal number of topics was 35 to allow comparison between the two publications.

⁵ In a topic, each token (term or phrase) has a weight, some more dominant in their representation of the topic than others. In practice, the five (or so) most dominant terms enabled the researchers to identify the topic content and manually assign a label. For instance, the key terms “intergovernmental,” “response,” “relations,” “emergency,” and “management” largely characterized the field of emergency management. We thus labeled this topic as “emergency management.”

⁶ Two practitioner topics from PAT could not be named based on the terms. Further terms beyond the five shown here were reviewed, but did not provide further information on a suitable label for these topics. We thus named them Miscellaneous 1 and Miscellaneous 2.

References

- Arun, Rajkumar, Venkatasubramanian Suresh, CE Veni Madhavan, and MN Narasimha Murthy. 2010. On Finding the Natural Number of Topics with Latent Dirichlet Allocation: Some Observations. In Zaki M.J., Yu J.X., Ravindran B., Pudi V. (eds) *Advances in Knowledge Discovery and Data Mining. Lecture Notes in Computer Science*, vol 6118. Springer, Berlin, Heidelberg.
- Blei, David M, and John D Lafferty. 2007. A Correlated Topic Model of Science. *The Annals of Applied Statistics* 1(1): 17-35.
- Blei, David M, Andrew Y Ng, and Michael I. Jordan. 2003. Latent Dirichlet Allocation. *Journal of Machine Learning Research* 3(1): 993-1022.
- Cao, Juan, Tian Xia, Jintao Li, Yongdong Zhang, and Sheng Tang. 2009. A Density-Based Method for Adaptive LDA Model Selection. *Neurocomputing* 72(7-9): 1775-1781.
- Edwards, Meredith. 2005. Social Science Research and Public Policy: Narrowing The Divide. *Australian Journal of Public Administration* 64(1): 68-74.
- Griffiths, Thomas L, and Mark Steyvers. 2004. Finding Scientific Topics. *Proceedings of the National academy of Sciences Steyvers* 101(suppl 1): 5228-5235.
- Grimmer, Justin, and Brandon M Stewart. 2013. Text as Data: The Promise and Pitfalls of Automatic Content Analysis Methods for Political Texts. *Political Analysis* 21(3): 267-297.
- Haans, Richard F.J., and Arjen van Witteloostuijn. 2019. Regional Sickness of Novel Ideas in the Scholarly International Business Community. *Cross Cultural & Strategic Management* doi.org/10.118/CCSM-07-2018-0102.
- Hornik, Kurt, and Bettina Grün. 2011. Topicmodels: An R Package for Fitting Topic Models.

- Journal of Statistical Software* 40(13): 1-30.
- Howlett, Michael, and Joshua Newman. 2010. Policy Analysis and Policy Work in Federal Systems: Policy Advice and Its Contribution to Evidence-Based Policy-Making in Multi-Level Governance Systems. *Policy Society* 29(2): 123-136.
- Jennings, Edward T., Jr., and Jeremy L. Hall. 2012. Evidence-Based Practice and the Use of Information in State Agency Decision Making. *Journal of Public Administration Research and Theory* 22(2): 245–66.
- Jiang, Junyan, Tianguang Meng, and Qing Zhang. 2019. From Internet to Social Safety Net: The Policy Consequences of Online Participation in China. *Governance*.
<https://doi.org/10.1111/gove.12391>
- Landry, Réjean, Moktar Lamari, and Nabil Amara. 2003. The Extent and Determinants of the Utilization of University Research in Government Agencies. *Public Administration Review* 63(2): 192-205.
- Lauderdale, Benjamin E, and Tom S Clark. 2014. Scaling Politically Meaningful Dimensions Using Texts and Votes. *American Journal of Political Science* 58(3): 754-771.
- Newman, Joshua, Adrian Cherney, and Brian W Head. 2016. Do Policy Makers Use Academic Research? Reexamining the “Two Communities” Theory of Research Utilization. *Public Administration Review* 76(1): 24-32.
- Roberts, Margaret E, Brandon M Stewart, Dustin Tingley, Christopher Lucas, Jetson Leder-Luis, Shana Kushner Gadarian, Bethany Albertson, and David G Rand. 2014. Structural Topic Models for Open-Ended Survey Responses. *American Journal of Political Science* 58(4): 1064-1082.
- Simon, Herbert A. 1947. A Comment on "The Science of Public Administration". *Public*

Administration Review 7(3): 200-203.

Steyvers, Mark, and Tom Griffiths. 2007. Probabilistic topic models. *Handbook of Latent*

Semantic Analysis 427(7): 424-440.

van Witteloostuijn, Arjen. 2016. What Happened to Popperian Falsification? Publishing Neutral and Negative Findings: Moving Away from Biased Publication Practices. *Cross Cultural and Strategic Management* 23(3): 481-508.

Table 1: Same Topics with Top Five Terms, Topic Weight from PAR and PA Times

| <i>Public Administration Review</i> | | | | <i>PA Times</i> | | | |
|-------------------------------------|------|------------------|---|---------------------------|------|------------------|---|
| Topic Name | Rank | Topic Weight (%) | Top five terms in the topic | Topic Name | Rank | Topic Weight (%) | Top five terms in the topic |
| Same Topics | | | | | | | |
| Performance management | 3 | 4.48 | Performance, management, information, managerial, effectiveness | Performance Management | 5 | 3.95 | management, performance, organization, process, goals |
| Citizen Participation | 7 | 3.45 | Citizens, citizen, participation, engagement, increase | Citizen Participation | 25 | 1.99 | government, citizens, citizen, participation, accountability |
| Emergency Management | 10 | 3.20 | Intergovernmental, response, relations, emergency, management | Emergency Management | 4 | 4.28 | emergency, disaster, management, response, crisis |
| Election | 11 | 3.20 | Election, market, financial, costs, terms | Election | 24 | 1.99 | political, elected, politics, election, party |
| Financial Management | 16 | 2.81 | Process, budget, transparency, fiscal, budgeting | Financial Management | 15 | 2.85 | state, budget, financial, local, funding |
| Nonprofit Management | 21 | 2.56 | Nonprofit, organizations, human, resource, nonprofits | Nonprofit Management | 9 | 3.62 | community, organizations, nonprofit, resources, collaboration |
| Ethics | 22 | 2.56 | Behavior, school, ethics, ethical, schools | Ethics | 26 | 1.92 | ethical, ethics, public, code, administrators |
| Public-private Relation | 24 | 2.30 | Sector, new, change, private, changes | Public-Private Relation | 23 | 1.99 | private, sector, government, business, services |
| Health care | 25 | 2.30 | health care act quality regulatory | Health Care | 6 | 3.95 | health, care, insurance, services, medical |
| Total Topic Weight | | 26.86 | | Total Topic Weight | | 26.54 | |

Table 2: Similar Topics with Top Five Terms, Topic Weight from PAR and PA Times

| <i>Public Administration Review</i> | | | | <i>PA Times</i> | | | |
|-------------------------------------|------|------------------|---|----------------------------|------|------------------|---|
| Topic Name | Rank | Topic Weight (%) | Top five terms in the topic | Topic Name | Rank | Topic Weight (%) | Top five terms in the topic |
| Similar Topics | | | | | | | |
| Public service motivation | 2 | 5.88 | Public, service, motivation, work, employees | Human Resource | 3 | 4.48 | employees, work, employee, job, workforce |
| Local-State Government | 4 | 4.22 | Local, government, governments, state, level | Intergovernmental Relation | 32 | 1.49 | government, federal, agencies, agency, state |
| Reforms | 5 | 3.84 | Reform, new, reforms, politics, training | Innovation | 30 | 1.66 | new, change, innovation, ideas, future |
| Comparative Study | 6 | 3.84 | States, united, state, university, comparative | Internationalization | 13 | 3.09 | world, countries, united, international, global |
| Leadership Strategy | 8 | 3.32 | Leadership, important, strategic, practice, strategy | Leadership | 8 | 3.75 | leadership, leaders, organization, organizational, team |
| Economic Development | 12 | 3.07 | Development, economic, collaboration, lessons, problems | Tax and Economy | 16 | 2.62 | economic, tax, economy, income, states |
| Social Capital | 17 | 2.81 | Social, community, equity, capital, media | Community Development | 10 | 3.55 | local, city, community, development, communities |
| Representative Bureaucracy | 23 | 2.43 | Police, bureaucracy, gender, representative, women | Social Equity | 11 | 3.28 | women, social, equity, diversity, gender |

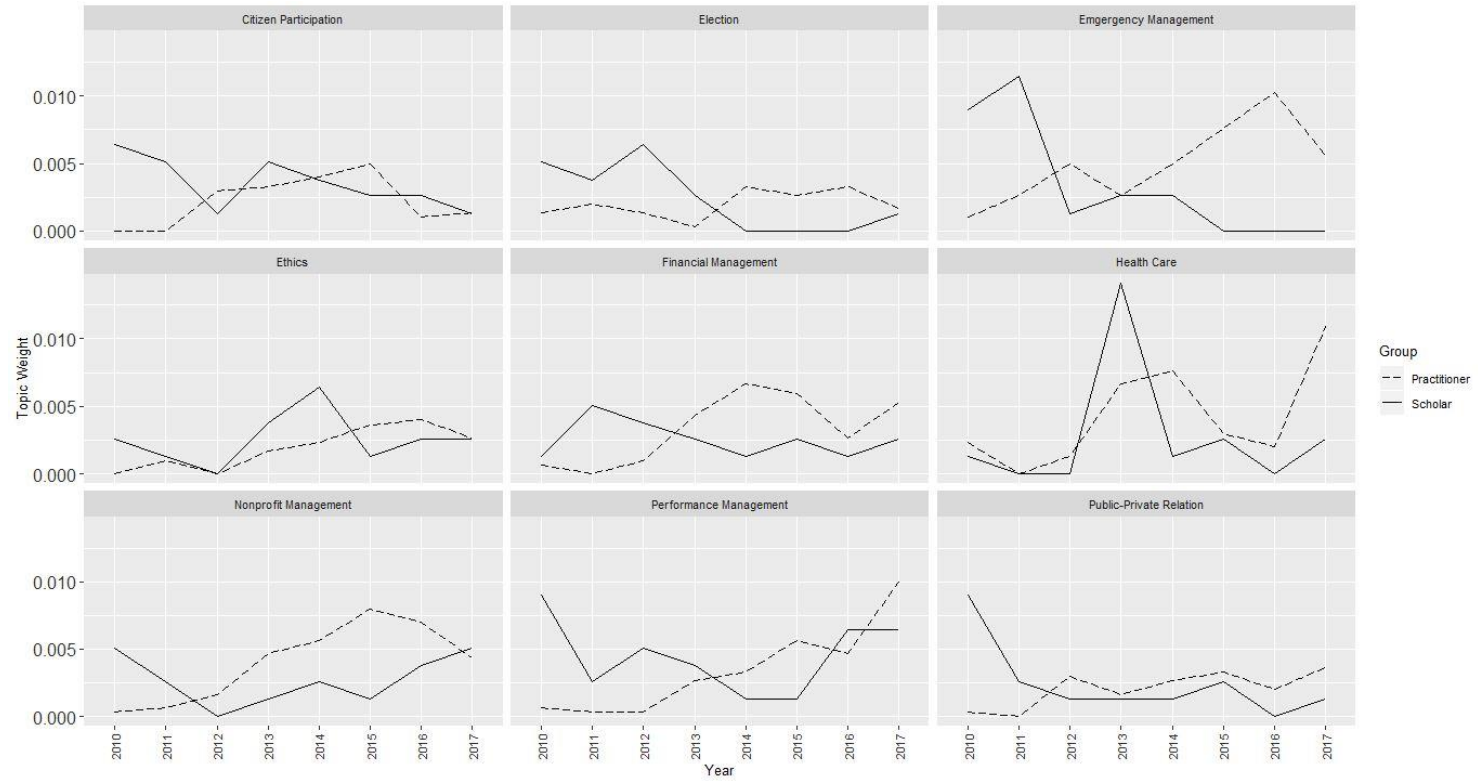
| | | | | | | | |
|---------------------------|----|--------------|---|---------------------------|----|--------------|--|
| Environmental governance | 32 | 1.41 | Environmental, greater, innovation, link, firms | Sustainability | 17 | 2.62 | water, environmental, energy, climate, natural |
| Total Topic Weight | | 30.82 | | Total Topic Weight | | 26.54 | |

Table 3: Distinct Topics with Top Five Terms, Topic Weight from PAR and PA Times

| <i>Public Administration Review</i> | | | | <i>PA Times</i> | | | |
|-------------------------------------|------|------------------|---|------------------------|------|------------------|--|
| Topic Name | Rank | Topic Weight (%) | Top five terms in the topic | Topic Name | Rank | Topic Weight (%) | Top five terms in the topic |
| Distinct Topics | | | | | | | |
| PA Practice | 1 | 7.29 | Public, administration, field, practice, practitioners | Practical Solution | 1 | 7.66 | work, right, good, want, way |
| Federalist | 9 | 3.32 | Government, national, federalist, executive, good | ASPA Program | 2 | 6.70 | aspa, public, university, administration, national |
| Contracting-out | 13 | 3.07 | Services, service, delivery, contracting, contract | MPA education | 7 | 3.92 | students, programs, learning, mpa, experience |
| Collaborative Governance | 14 | 3.07 | Governance, collaborative, partnerships, systems, design | Information Technology | 12 | 3.15 | data, technology, information, new, systems |
| Organizational Development | 15 | 2.94 | Organizational, organizations, outcomes, diversity, culture | Social Media | 14 | 2.92 | social, media, information, use, online |
| Policy Implementation | 18 | 2.81 | Policy, policies, implementation, makers, place | Rule of Law | 18 | 2.49 | law, rights, court, states, laws |
| Public Values | 19 | 2.81 | Public, values, value, institutional, efficiency | Presidency | 19 | 2.49 | president, congress, house, American, Obama |

| | | | | | | | |
|---------------------------------------|----|--------------|--|---------------------------|----|--------------|---|
| Federal Agencies | 20 | 2.69 | Federal, government, agencies, agency, control | Law Enforcement | 20 | 2.46 | police, law, enforcement, officers, community |
| City Manager | 26 | 2.05 | Managers, city, role, cities, turnover | Miscellaneous 1 | 21 | 2.22 | must, need, order, different, organization |
| Institution Capacity | 27 | 1.92 | Institutions, power, building, education, action | Education | 22 | 2.09 | school, education, schools, students, children |
| Network Management | 28 | 1.92 | Networks, network, relationships, learning, actors | Age | 27 | 1.76 | population, county, age, generation, millennials |
| Trust | 29 | 1.79 | Associated, impact, trust, levels, satisfaction | Human-Society Relation | 28 | 1.69 | human, American, society, century, world |
| Grant Funding | 30 | 1.79 | Program, programs, capacity, funding, goal | Miscellaneous 2 | 29 | 1.69 | great, world, lives, man, image |
| Political Administrative Perspectives | 31 | 1.53 | Political, administrative, administrators, current, perspectives | Veteran Welfare | 31 | 1.63 | service, military, veterans, members, families |
| Accountability | 33 | 1.28 | Accountability, areas, expectations, way, decline | Public Service | 33 | 1.46 | public, administration, service, administrators, sector |
| Red Tape | 34 | 1.28 | Perceptions, rules, perceived, tape, red | Policy Study | 34 | 1.39 | research, policy, study, theory, analysis |
| Decision Making | 35 | 0.77 | Making, decision, decisions, complex, influence | Food safety | 35 | 1.19 | food, japan, nuclear, protected, print |
| Total Topic Weight | | 42.33 | | Total Topic Weight | | 46.91 | |

Figure 1: The Evolution of Topic Weight for Same Topics Shared by Scholars and Practitioners (2010-2017)



Appendix 1

35 Topics with Top Five Terms, Topic Weight from PAR

| Topic Name | Rank | Weight | Top Five Terms in Each Topic |
|--------------------------------|------|--------|---|
| PA Practice | 1 | 0.0729 | public, administration, field, practice, practitioners |
| Public Service Motivation | 2 | 0.0588 | public, service, motivation, work, employees |
| Performance Management | 3 | 0.0448 | performance, management, information, managerial, effectiveness |
| Local-state Government | 4 | 0.0422 | local, government, governments, state, level |
| Reforms | 5 | 0.0384 | reform, new, reforms, politics, training |
| Comparative Study | 6 | 0.0384 | states, united, state, university, comparative |
| Citizen Participation | 7 | 0.0345 | citizens, citizen, participation, engagement, increase |
| Leadership Strategy | 8 | 0.0332 | leadership, important, strategic, practice, strategy |
| Federalist | 9 | 0.0332 | government, national, federalist, executive, good |
| Emergency Management | 10 | 0.0320 | intergovernmental, response, relations, emergency, management |
| Election | 11 | 0.0320 | election, market, financial, costs, terms |
| Contracting-out | 12 | 0.0307 | services, service, delivery, contracting, contract |
| Economic Development | 13 | 0.0307 | development, economic, collaboration, lessons, problems |
| Collaborative Governance | 14 | 0.0307 | governance, collaborative, partnerships, systems, design |
| Organizational Development | 15 | 0.0294 | organizational, organizations, outcomes, diversity, culture |
| Social Capital | 16 | 0.0281 | social, community, equity, capital, media |
| Policy Implementation | 17 | 0.0281 | policy, policies, implementation, makers, place |
| Public Values | 18 | 0.0281 | public, values, value, institutional, efficiency |
| Financial Management | 19 | 0.0281 | process, budget, transparency, fiscal, budgeting |
| Federal Agencies | 20 | 0.0269 | federal, government, agencies, agency, control |
| Nonprofit Management | 21 | 0.0256 | nonprofit, organizations, human, resource, nonprofits |
| Ethics | 22 | 0.0256 | behavior, school, ethics, ethical, schools |
| Representative Bureaucracy | 23 | 0.0243 | police, bureaucracy, gender, representative, women |
| Public-private sector relation | 24 | 0.0230 | sector, new, change, private, changes |
| Health care | 25 | 0.0230 | health, care, act, quality, regulatory |
| City Manager | 26 | 0.0205 | managers, city, role, cities, turnover |

| | | | |
|---------------------------------------|----|--------|--|
| Institution Capacity | 27 | 0.0192 | institutions, power, building, education, action |
| Network Management | 28 | 0.0192 | networks, network, relationships, learning, actors |
| Trust | 29 | 0.0179 | associated, impact, trust, levels, satisfaction |
| Grant Funding | 30 | 0.0179 | program, programs, capacity, funding, goal |
| Political Administrative Perspectives | 31 | 0.0153 | political, administrative, administrators, current, perspectives |
| Environmental Governance | 32 | 0.0141 | environmental, greater, innovation, link, firms |
| Accountability | 33 | 0.0128 | accountability, areas, expectations, way, decline |
| Red Tape | 34 | 0.0128 | perceptions, rules, perceived, tape, red |
| Decision Making | 35 | 0.0077 | making, decision, decisions, complex, influence |

Appendix 3

35 Topics with Top Five Terms, Topic Weight from PA Times

| Topic Name | Rank | Topic Weight | Top Five Terms in Each Topic |
|-------------------------|------|--------------|---|
| Practical Solution | 1 | 0.0766 | work, right, good, want, way |
| ASPA Program | 2 | 0.0670 | aspa, public, university, administration, national |
| Human Resource | 3 | 0.0448 | employees, work, employee, job, workforce |
| Emergency Management | 4 | 0.0428 | emergency, disaster, management, response, crisis |
| Performance Management | 5 | 0.0395 | management, performance, organization, process, goals |
| Health Care | 6 | 0.0395 | health, care, insurance, services, medical |
| MPA education | 7 | 0.0392 | students, programs, learning, mpa, experience |
| Leadership | 8 | 0.0375 | leadership, leaders, organization, organizational, team |
| Nonprofit Management | 9 | 0.0362 | community, organizations, nonprofit, resources, collaboration |
| Community Development | 10 | 0.0355 | local, city, community, development, communities |
| Social Equity | 11 | 0.0328 | women, social, equity, diversity, gender |
| Information Technology | 12 | 0.0315 | data, technology, information, new, systems |
| Internationalization | 13 | 0.0309 | world, countries, united, international, global |
| Social Media | 14 | 0.0292 | social, media, information, use, online |
| Financial Management | 15 | 0.0285 | state, budget, financial, local, funding |
| Tax and Economy | 16 | 0.0262 | economic, tax, economy, income, states |
| Sustainability | 17 | 0.0262 | water, environmental, energy, climate, natural |
| Rule of Law | 18 | 0.0249 | law, rights, court, states, laws |
| Presidency | 19 | 0.0249 | president, congress, house, American, Obama |
| Law Enforcement | 20 | 0.0246 | police, law, enforcement, officers, community |
| Miscellaneous 1 | 21 | 0.0222 | must, need, order, different, organization |
| Education | 22 | 0.0209 | school, education, schools, students, children |
| Public-Private Relation | 23 | 0.0199 | private, sector, government, business, services |
| Election | 24 | 0.0199 | political, elected, politics, election, party |
| Citizen Participation | 25 | 0.0199 | government, citizens, citizen, participation, accountability |
| Ethics | 26 | 0.0192 | ethical, ethics, public, code, administrators |
| Aging | 27 | 0.0176 | population, county, age, generation, millennials |
| Human-Society Relation | 28 | 0.0169 | human, American, society, century, world |

| | | | |
|----------------------------|----|--------|---|
| Miscellaneous 2 | 29 | 0.0169 | great, world, lives, man, image |
| Innovation | 30 | 0.0166 | new, change, innovation, ideas, future |
| Veteran Welfare | 31 | 0.0163 | service, military, veterans, members, families |
| Intergovernmental Relation | 32 | 0.0149 | government, federal, agencies, agency, state |
| Public Service | 33 | 0.0146 | public, administration, service, administrators, sector |
| Policy Study | 34 | 0.0139 | research, policy, study, theory, analysis |
| Food safety | 35 | 0.0119 | food, japan, nuclear, protected, print |
